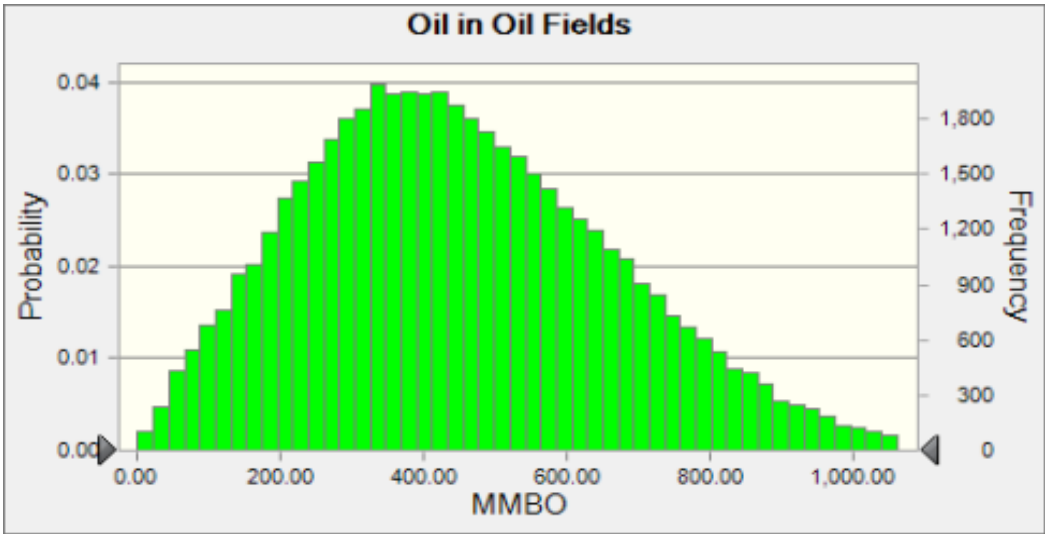
20540302
Hamra Basin Deep Structures and Subcrop
Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:
Entire range is from 1.16 to 1,482.55
After 50,000 trials, the standard error of the mean is 0.98



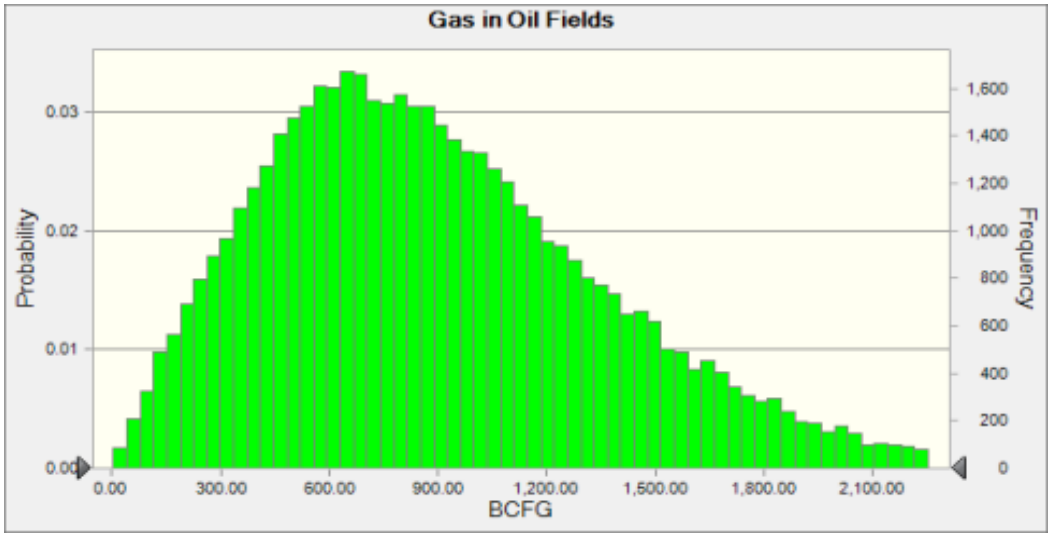
Statistics:	Forecast values
Trials	50,000
Mean	450.52
Median	430.26
Mode	---
Standard Deviation	219.17
Variance	48,034.23
Skewness	0.4496
Kurtosis	2.86
Coefficient of Variability	0.4865
Minimum	1.16
Maximum	1,482.55
Range Width	1,481.39
Mean Standard Error	0.98

Forecast: Oil in Oil Fields (continued)

Percentiles:	MMBO
100%	1.16
95%	124.10
90%	176.79
85%	218.52
80%	254.92
75%	287.24
70%	316.33
65%	344.88
60%	372.89
55%	401.13
50%	430.26
45%	459.32
40%	490.30
35%	522.34
30%	557.36
25%	596.47
20%	638.60
15%	688.80
10%	751.39
5%	840.56
0%	1,482.55

Forecast: Gas in Oil Fields

Summary:
Entire range is from 1.76 to 3,823.65
After 50,000 trials, the standard error of the mean is 2.16



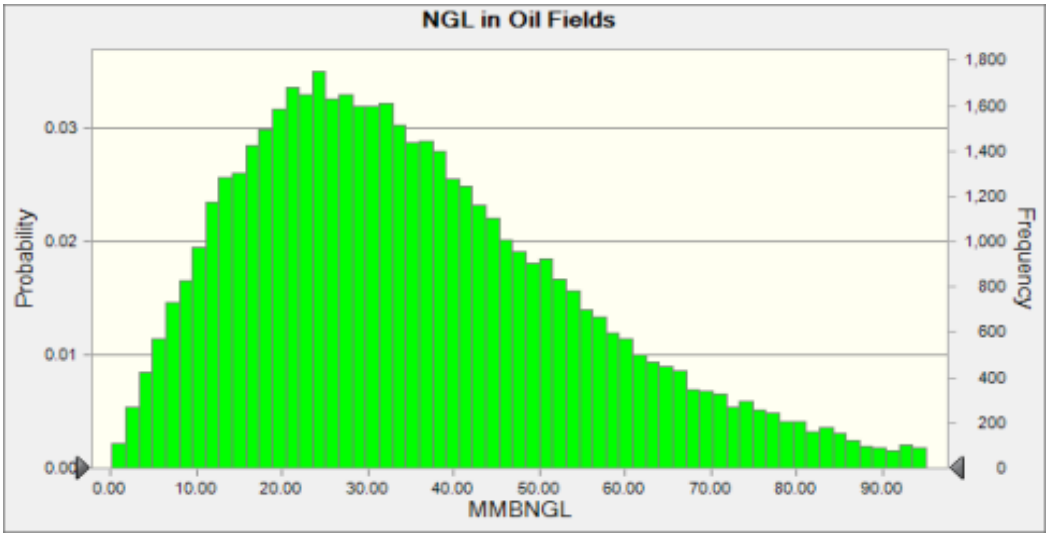
Statistics:	Forecast values
Trials	50,000
Mean	901.68
Median	835.52
Mode	---
Standard Deviation	482.79
Variance	233,087.43
Skewness	0.7482
Kurtosis	3.55
Coefficient of Variability	0.5354
Minimum	1.76
Maximum	3,823.65
Range Width	3,821.89
Mean Standard Error	2.16

Forecast: Gas in Oil Fields (continued)

Percentiles:	BCFG
100%	1.76
95%	231.70
90%	332.55
85%	410.63
80%	478.86
75%	541.64
70%	599.81
65%	657.52
60%	715.97
55%	775.20
50%	835.52
45%	896.65
40%	963.78
35%	1,034.92
30%	1,109.93
25%	1,193.80
20%	1,289.14
15%	1,404.65
10%	1,559.10
5%	1,801.26
0%	3,823.65

Forecast: NGL in Oil Fields

Summary:
Entire range is from 0.06 to 188.17
After 50,000 trials, the standard error of the mean is 0.09



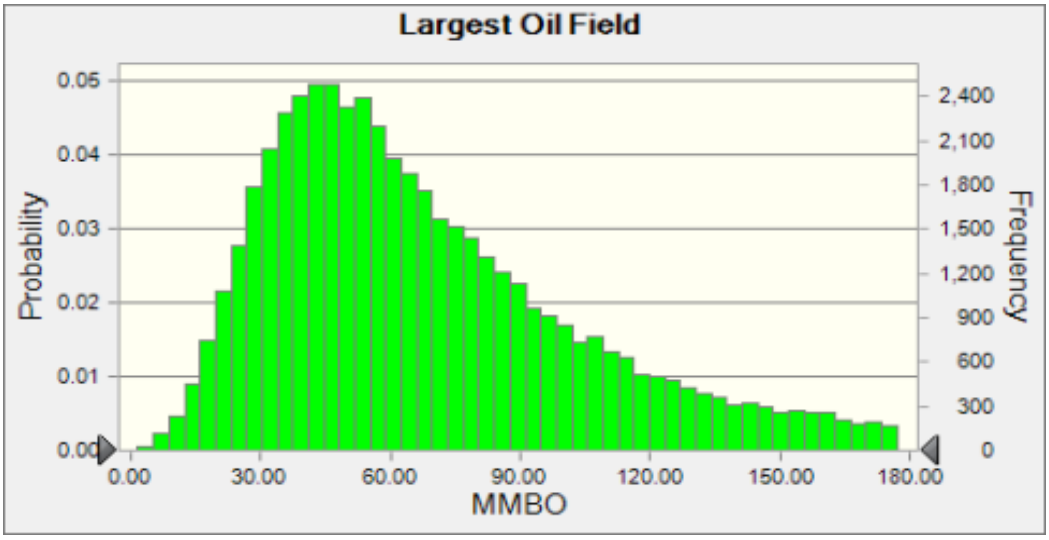
Statistics:	Forecast values
Trials	50,000
Mean	36.05
Median	32.46
Mode	---
Standard Deviation	21.03
Variance	442.17
Skewness	1.01
Kurtosis	4.42
Coefficient of Variability	0.5833
Minimum	0.06
Maximum	188.17
Range Width	188.11
Mean Standard Error	0.09

Forecast: NGL in Oil Fields (continued)

Percentiles:	MMBNGL
100%	0.06
95%	8.68
90%	12.39
85%	15.37
80%	18.02
75%	20.52
70%	22.94
65%	25.24
60%	27.58
55%	29.92
50%	32.46
45%	35.02
40%	37.71
35%	40.66
30%	44.03
25%	47.84
20%	52.06
15%	57.36
10%	64.41
5%	75.98
0%	188.17

Forecast: Largest Oil Field

Summary:
Entire range is from 1.16 to 199.95
After 50,000 trials, the standard error of the mean is 0.17



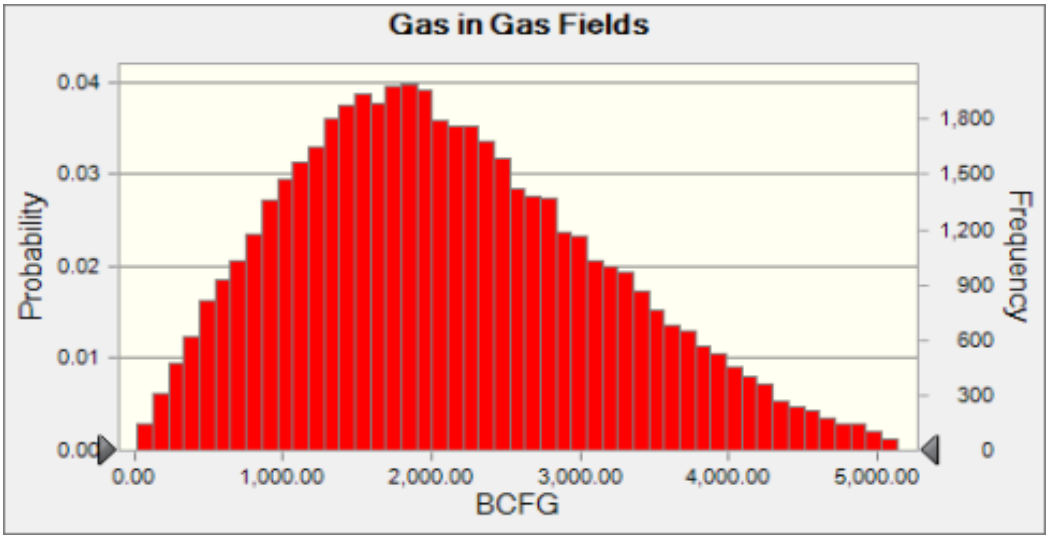
Statistics:	Forecast values
Trials	50,000
Mean	69.47
Median	60.26
Mode	---
Standard Deviation	38.81
Variance	1,506.37
Skewness	1.05
Kurtosis	3.75
Coefficient of Variability	0.5587
Minimum	1.16
Maximum	199.95
Range Width	198.79
Mean Standard Error	0.17

Forecast: Largest Oil Field (continued)

Percentiles:	MMBO
100%	1.16
95%	22.55
90%	28.39
85%	33.04
80%	37.07
75%	40.94
70%	44.55
65%	48.26
60%	52.13
55%	56.21
50%	60.26
45%	64.85
40%	69.80
35%	75.48
30%	81.77
25%	89.41
20%	98.38
15%	109.80
10%	125.80
5%	150.85
0%	199.95

Forecast: Gas in Gas Fields

Summary:
Entire range is from 19.62 to 7,504.18
After 50,000 trials, the standard error of the mean is 4.82



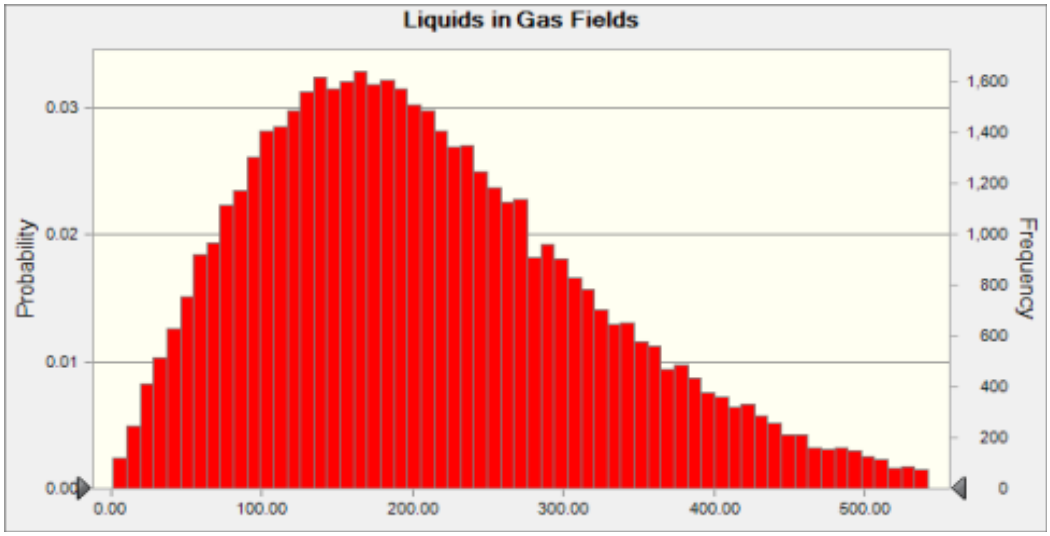
Statistics:	Forecast values
Trials	50,000
Mean	2,130.43
Median	2,009.90
Mode	---
Standard Deviation	1,078.62
Variance	1,163,411.18
Skewness	0.5338
Kurtosis	2.98
Coefficient of Variability	0.5063
Minimum	19.62
Maximum	7,504.18
Range Width	7,484.56
Mean Standard Error	4.82

Forecast: Gas in Gas Fields (continued)

Percentiles:	BCFG
100%	19.62
95%	556.06
90%	804.49
85%	1,004.00
80%	1,174.51
75%	1,326.69
70%	1,461.92
65%	1,601.51
60%	1,734.02
55%	1,869.20
50%	2,009.90
45%	2,149.79
40%	2,302.50
35%	2,467.54
30%	2,640.36
25%	2,833.36
20%	3,045.97
15%	3,292.76
10%	3,624.30
5%	4,087.64
0%	7,504.18

Forecast: Liquids in Gas Fields

Summary:
Entire range is from 1.83 to 864.64
After 50,000 trials, the standard error of the mean is 0.53



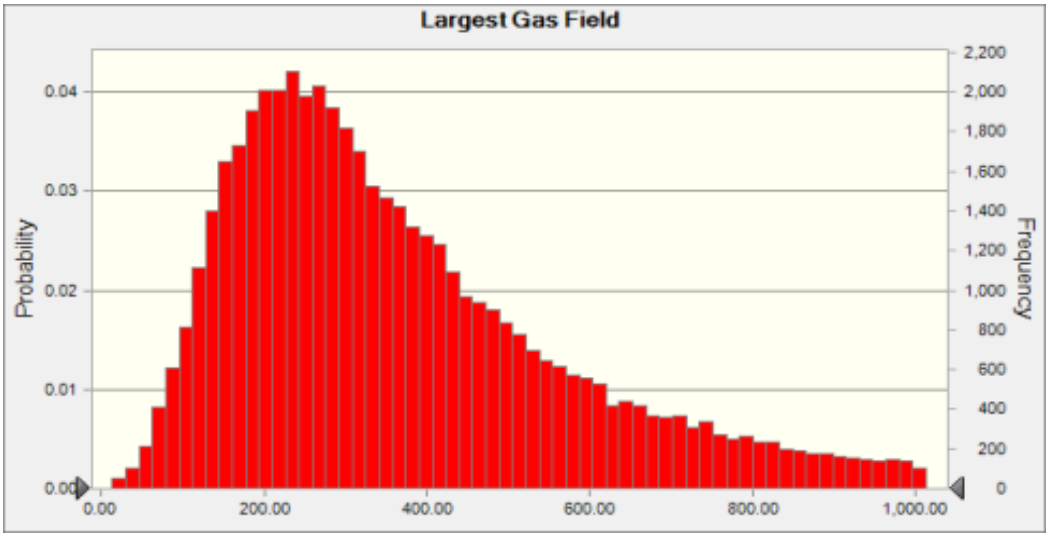
Statistics:	Forecast values
Trials	50,000
Mean	213.20
Median	195.08
Mode	---
Standard Deviation	118.43
Variance	14,024.85
Skewness	0.8175
Kurtosis	3.68
Coefficient of Variability	0.5555
Minimum	1.83
Maximum	864.64
Range Width	862.81
Mean Standard Error	0.53

Forecast: Liquids in Gas Fields (continued)

Percentiles:	MMBL
100%	1.83
95%	51.45
90%	75.42
85%	93.83
80%	110.01
75%	125.11
70%	138.97
65%	153.45
60%	167.15
55%	180.77
50%	195.08
45%	209.93
40%	225.55
35%	242.73
30%	262.26
25%	283.49
20%	307.21
15%	336.44
10%	374.67
5%	436.96
0%	864.64

Forecast: Largest Gas Field

Summary:
Entire range is from 10.67 to 1,199.93
After 50,000 trials, the standard error of the mean is 1.01



Statistics:	Forecast values
Trials	50,000
Mean	377.70
Median	320.41
Mode	---
Standard Deviation	224.92
Variance	50,590.23
Skewness	1.19
Kurtosis	4.20
Coefficient of Variability	0.5955
Minimum	10.67
Maximum	1,199.93
Range Width	1,189.26
Mean Standard Error	1.01

Forecast: Largest Gas Field (continued)

Percentiles:	BCFG
100%	10.67
95%	115.64
90%	147.42
85%	171.98
80%	194.03
75%	214.33
70%	234.62
65%	255.01
60%	275.25
55%	297.34
50%	320.41
45%	345.28
40%	374.28
35%	405.35
30%	441.65
25%	484.82
20%	537.60
15%	605.59
10%	698.59
5%	849.68
0%	1,199.93

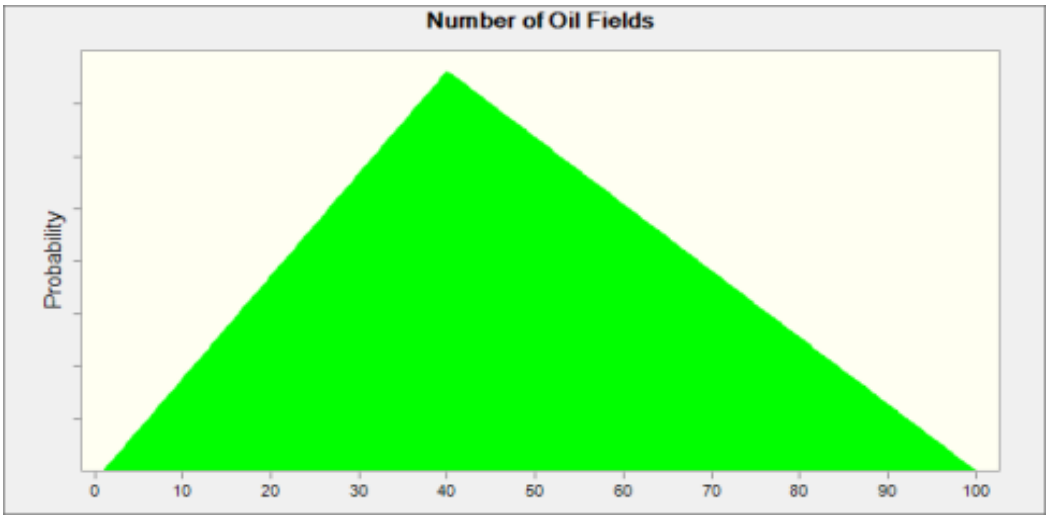
End of Forecasts

Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	40
Maximum	100



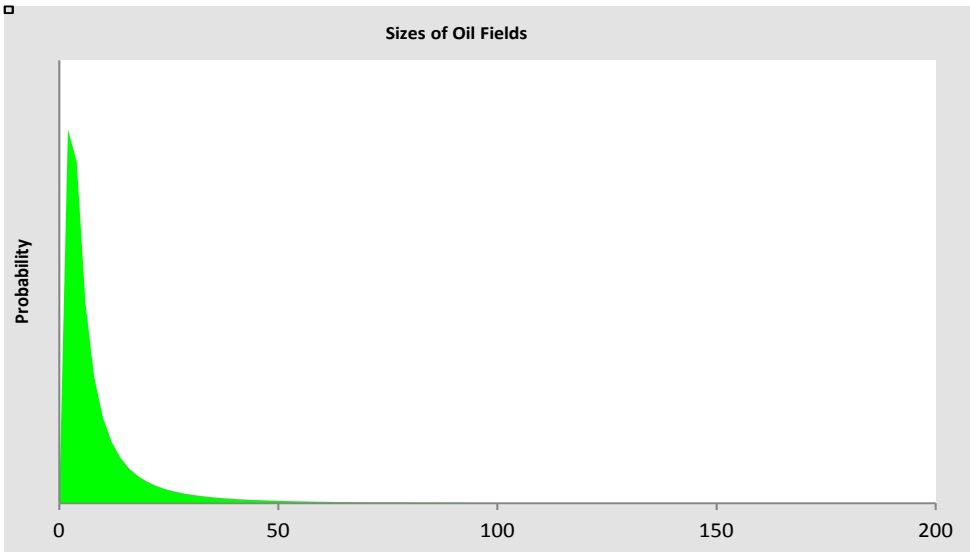
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	47	47
Median	45	46
Mode	---	40
Standard Deviation	20	20
Variance	413	415
Skewness	0.2091	0.2022
Kurtosis	2.40	2.40
Coefficient of Variability	0.4343	0.4332
Minimum	1	1
Maximum	100	100
Range Width	99	99
Mean Standard Error	0	---

Assumption: Number of Oil Fields (continued)

Percentiles:	Theoretical values
100%	1
95%	15
90%	21
85%	25
80%	29
75%	32
70%	35
65%	38
60%	40
55%	43
50%	46
45%	48
40%	51
35%	54
30%	58
25%	61
20%	66
15%	70
10%	76
5%	83
0%	100

Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	8.90	9.9
Standard Deviation	17.67	17.67
Selected range is from -Infinity to 199.00		1.00 to 200.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	9.61	9.60
Median	4.97	4.99
Mode	---	0.81
Standard Deviation	14.31	14.33
Variance	204.90	205.32
Skewness	4.95	4.97
Kurtosis	39.54	39.26
Coefficient of Variability	1.49	1.49
Minimum	1.03	1.00
Maximum	199.26	200.00
Range Width	198.23	199.00
Mean Standard Error	0.06	---

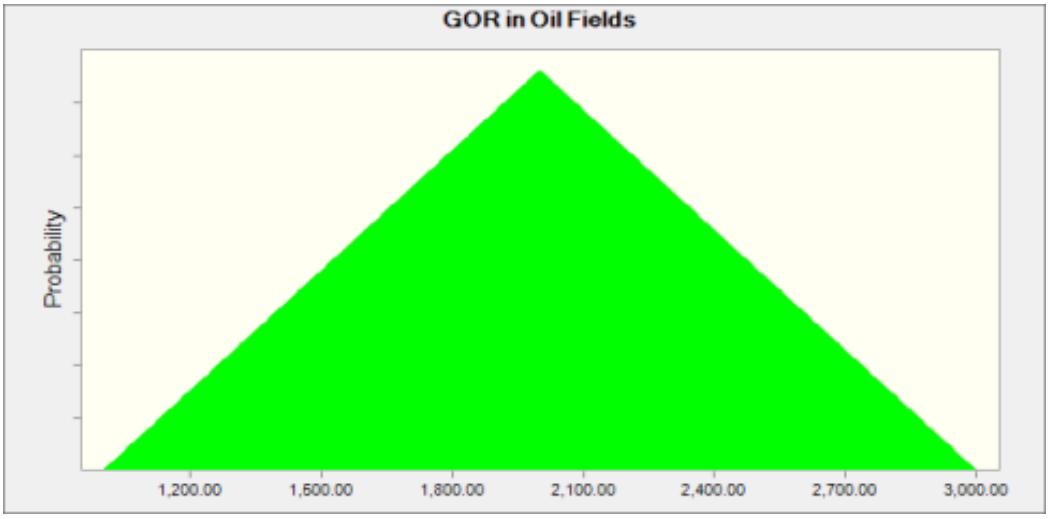
Assumption: Sizes of Oil Fields (continued)

Percentiles:	Theoretical values
100%	1.00
95%	1.50
90%	1.79
85%	2.08
80%	2.38
75%	2.70
70%	3.06
65%	3.45
60%	3.90
55%	4.41
50%	4.99
45%	5.68
40%	6.50
35%	7.50
30%	8.74
25%	10.36
20%	12.55
15%	15.76
10%	21.09
5%	32.64
0%	200.00

Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,000.00
Likeliest	2,000.00
Maximum	3,000.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	2,002.19	2,000.00
Median	2,005.14	2,000.00
Mode	---	2,000.00
Standard Deviation	408.54	408.25
Variance	166,908.02	166,666.67
Skewness	-0.0082	0.00
Kurtosis	2.39	2.40
Coefficient of Variability	0.2040	0.2041
Minimum	1,002.60	1,000.00
Maximum	2,995.60	3,000.00
Range Width	1,993.00	2,000.00
Mean Standard Error	1.83	---

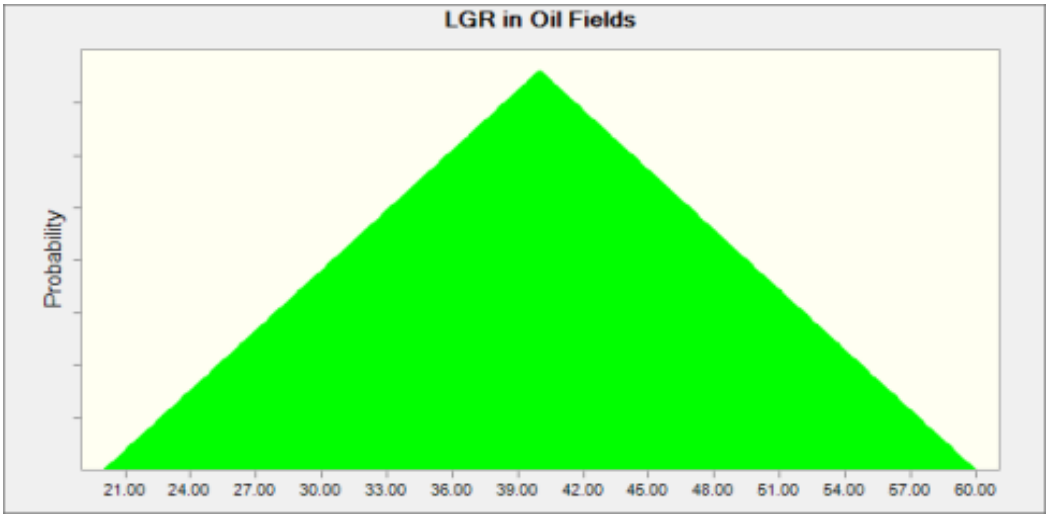
Assumption: GOR in Oil Fields (continued)

Percentiles:	Theoretical values
100%	1,000.00
95%	1,316.23
90%	1,447.21
85%	1,547.72
80%	1,632.46
75%	1,707.11
70%	1,774.60
65%	1,836.66
60%	1,894.43
55%	1,948.68
50%	2,000.00
45%	2,051.32
40%	2,105.57
35%	2,163.34
30%	2,225.40
25%	2,292.89
20%	2,367.54
15%	2,452.28
10%	2,552.79
5%	2,683.77
0%	3,000.00

Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	20.00
Likeliest	40.00
Maximum	60.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	39.98	40.00
Median	39.96	40.00
Mode	---	40.00
Standard Deviation	8.15	8.16
Variance	66.38	66.67
Skewness	0.0084	0.00
Kurtosis	2.39	2.40
Coefficient of Variability	0.2038	0.2041
Minimum	20.09	20.00
Maximum	59.88	60.00
Range Width	39.79	40.00
Mean Standard Error	0.04	---

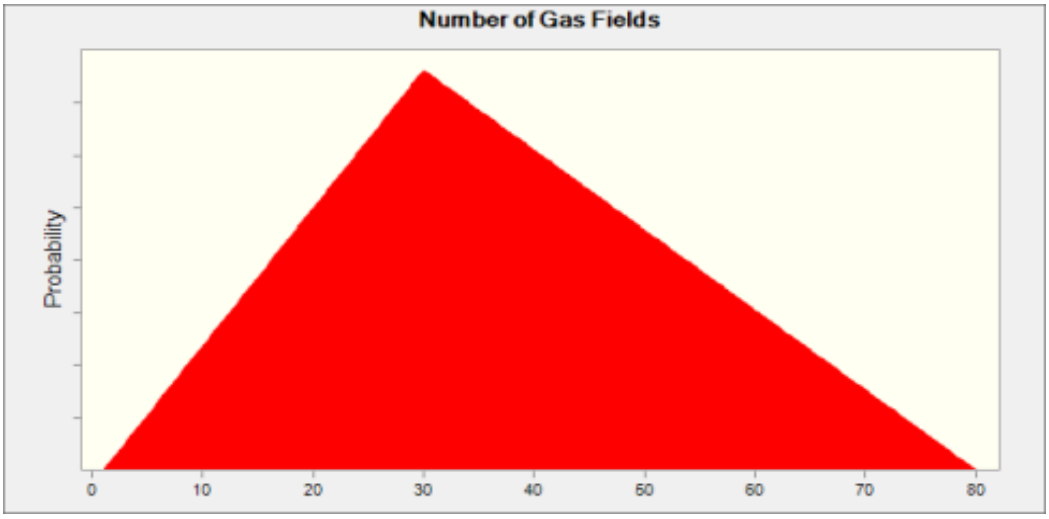
Assumption: LGR in Oil Fields (continued)

Percentiles:	Theoretical values
100%	20.00
95%	26.32
90%	28.94
85%	30.95
80%	32.65
75%	34.14
70%	35.49
65%	36.73
60%	37.89
55%	38.97
50%	40.00
45%	41.03
40%	42.11
35%	43.27
30%	44.51
25%	45.86
20%	47.35
15%	49.05
10%	51.06
5%	53.68
0%	60.00

Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	30
Maximum	80



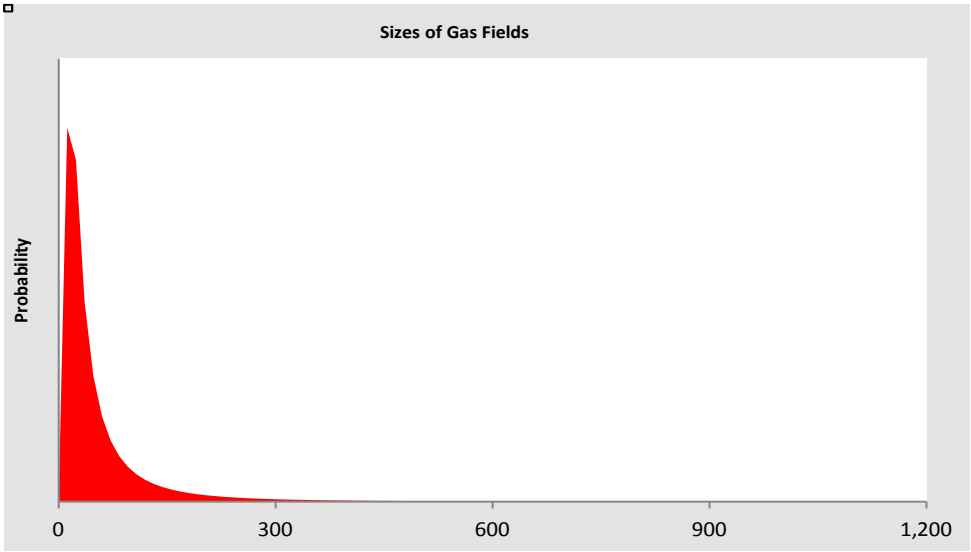
Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	37	37
Median	35	36
Mode	---	30
Standard Deviation	16	16
Variance	267	266
Skewness	0.2470	0.2495
Kurtosis	2.40	2.40
Coefficient of Variability	0.4421	0.4409
Minimum	1	1
Maximum	80	80
Range Width	79	79
Mean Standard Error	0	---

Assumption: Number of Gas Fields (continued)

Percentiles:	Theoretical values
100%	1
95%	12
90%	16
85%	20
80%	22
75%	25
70%	27
65%	29
60%	31
55%	33
50%	36
45%	38
40%	40
35%	43
30%	46
25%	49
20%	52
15%	56
10%	60
5%	66
0%	80

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	53.38	59.38
Standard Deviation	106.04	106.04
Selected range is from -Infinity to 1,194.00		6.00 to 1,200.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	57.39	57.62
Median	29.76	29.96
Mode	---	4.85
Standard Deviation	84.83	85.97
Variance	7,195.66	7,391.58
Skewness	4.90	4.97
Kurtosis	38.75	39.26
Coefficient of Variability	1.48	1.49
Minimum	6.16	6.00
Maximum	1,195.54	1,200.00
Range Width	1,189.38	1,194.00
Mean Standard Error	0.38	---

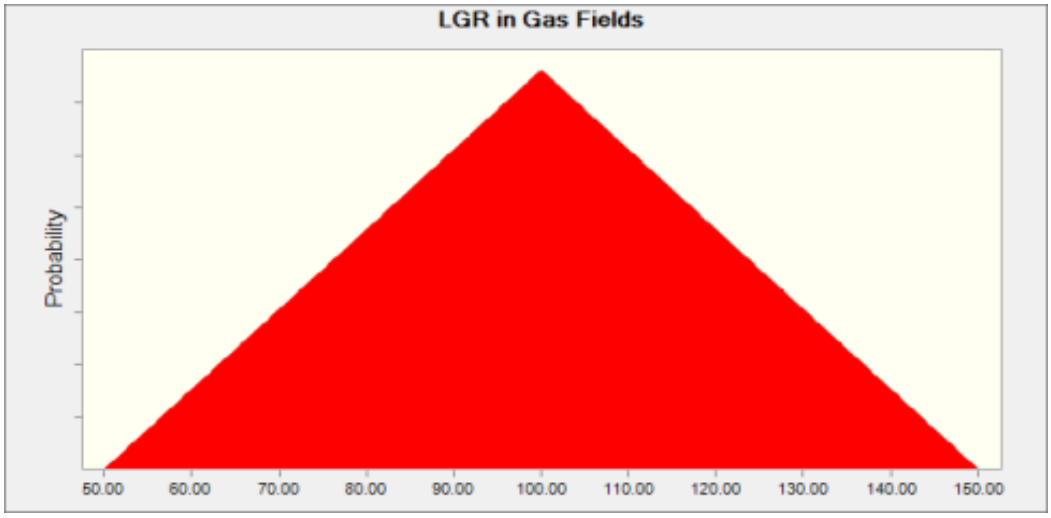
Assumption: Sizes of Gas Fields (continued)

Percentiles:	Theoretical values
100%	6.00
95%	9.00
90%	10.74
85%	12.47
80%	14.27
75%	16.22
70%	18.35
65%	20.73
60%	23.40
55%	26.44
50%	29.96
45%	34.08
40%	39.00
35%	44.98
30%	52.46
25%	62.14
20%	75.31
15%	94.58
10%	126.54
5%	195.85
0%	1,200.00

Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	50.00
Likeliest	100.00
Maximum	150.00



Statistics:	Simulated values	Theoretical values
Trials	50,000	---
Mean	100.03	100.00
Median	100.05	100.00
Mode	---	100.00
Standard Deviation	20.42	20.41
Variance	416.90	416.67
Skewness	-0.0106	0.00
Kurtosis	2.40	2.40
Coefficient of Variability	0.2041	0.2041
Minimum	50.31	50.00
Maximum	149.85	150.00
Range Width	99.54	100.00
Mean Standard Error	0.09	---

Assumption: LGR in Gas Fields (continued)

Percentiles:	Theoretical values
100%	50.00
95%	65.81
90%	72.36
85%	77.39
80%	81.62
75%	85.36
70%	88.73
65%	91.83
60%	94.72
55%	97.43
50%	100.00
45%	102.57
40%	105.28
35%	108.17
30%	111.27
25%	114.64
20%	118.38
15%	122.61
10%	127.64
5%	134.19
0%	150.00

End of Assumptions

Simulation started on 5/3/2006 at 13:55:23
Simulation stopped on 5/3/2006 at 14:13:41